AMENDMENTS TO THE CLAIMS

Please cancel claims 1, 2, 4, 6 and 9-16 without prejudice or disclaimer of the subject matter thereof.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Canceled)

2. (Canceled)

3. (Currently Amended) A three-dimensional shape measuring apparatus comprising[[:]]:

a measurement head for measuring a three-dimensional shape of a sample;

a stage ~~rotatably~~ holding the sample thereon; and

~~a movement mechanism for horizontally moving~~ a relative position measurer using at least one of electrostatic capacity, air pressure, and light to measure a relative position between the sample and the measurement head,

wherein ~~three-dimensional shapes at a plurality of points on the sample are measured by a combination of operations of the stage and the movement mechanism and by the measurement head~~ the relative position measurer includes at least two measurement members disposed so as to sandwich the measurement head therebetween; and

wherein while the measurement head measures the three-dimensional shape of the sample, the relative position measurer obtains a weighted average of outputs of the at least two measurement members so as to acquire a change in the relative position between the sample and the measurement head, the sample being disposed at a position to be measured by the measurement head.

4. (Canceled)

5. (Currently Amended) The three-dimensional shape measuring apparatus according to claim 1,

wherein the measurement head uses at least one of:

(1) a method of irradiating light on the sample, measuring at least one of an angle distribution or wavelength distribution of scattered light, and thereby ~~estimating~~ measuring a three-dimensional shape of the sample in an irradiated area of the light;

(2) a method of making a probe contact with the sample and measuring a three-dimensional shape of the sample [[while]] by making the probe and the sample [[are]] relatively scanned;

(3) a method of irradiating a charged particle beam onto the sample, detecting a secondary electron or reflected electron from the sample, and thereby measuring a three-dimensional shape of the sample;

(4) a method of irradiating a charged particle beam onto the sample, changing an angle of irradiation of the ~~irradiated~~ charged particle beam to form a plurality of images, and measuring a three-dimensional shape of the sample from a positional relation between the plurality of images acquired;

(5) a method of irradiating a charged particle beam onto the sample, detecting a hologram image ~~thereof~~ of the charged particle beam, and measuring a three-dimensional shape of the sample;

(6) a method of using a change in a light intensity or a level of sharpness due to a variation of a focus position of an light image under a microscope to measure a three-dimensional shape of the sample;

(7) a method of interfering detection light and reference light under a microscope to measure a three-dimensional shape of the sample; and

(8) a method of irradiating a laser beam onto the sample under a microscope, ~~performing~~ scanning the laser beam, and thereby measuring a three-dimensional shape of the sample.

6. (Canceled)

7. (Currently Amended) The three-dimensional shape measuring apparatus according to claim [[1]] 3, ~~further comprising a measurement means for measuring a relative position between the measurement head and the sample,~~

wherein ~~measurement~~ information on the relative position obtained by the relative position measurer is used to control a position of at least one of the measurement head and the stage.

8. (Currently Amended) The three-dimensional shape measuring apparatus according to claim 1, ~~further comprising a measurement means for measuring a relative position between the measurement head and the sample,~~

wherein the relative position measurer is used to record a change in the relative position between the measurement head and the sample, and ~~measurement~~ information ~~by the measurement means~~ on the recorded change is used to correct a measurement result of the three-dimensional shape of the sample obtained by the measurement head.

Claims 9 – 16 (canceled)